

WP 12-ES3918

Revision 0

Reporting Occurrences in Accordance with DOE Order 232.1A

Management Control Procedure

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APPROVED FOR USE

REVIEW ORGANIZATIONS

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Quality Assurance	N/A	N/A
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INTRODUCTION

This procedure establishes a system for reporting events to the Facility Manager (FM)/Facility Manager Designee (FMD) for categorization and reporting occurrences at the Waste Isolation Pilot Plant (WIPP). It applies to all departments and activities at the WIPP and at all DOE controlled facilities in Carlsbad. In addition, it includes occurrences resulting from activities performed by subcontractors at these facilities. This procedure is the implementing document for DOE Order 232.1A, Occurrence Reporting and Processing of Operations Information.

REFERENCES

BASELINE

- 10 CFR 835, Occupational Radiological Protection
- 29 CFR 1904.02, Recording and Reporting Occupational Injuries and Illnesses
- 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response
- 29 CFR 1910.1000, Occupational Safety and Health Standards, Air Contaminants
- 29 CFR 1910.1200, Occupational Safety and Health Standards, Hazard Communications
- 40 CFR 117, Environmental Protection Agency; Determination of Reportable Quantities for Hazardous Substances
- 40 CFR 261, Environmental Protection Agency; Identification and Listing of Hazardous Waste
- 40 CFR 262, Environmental Protection Agency; Standards Applicable to Generators of Hazardous Waste
- 40 CFR 302, Environmental Protection Agency; Designation, Reportable Quantities, and Notification
- 40 CFR 355, Environmental Protection Agency; Emergency Planning and Notification
- 49 CFR 171.8, Department of Transportation; Hazardous Materials Regulations
- 49 CFR 172.101, Department of Transportation; Table of Hazardous Materials and Special Provisions

- DOE N 441.1, Radiological Protection for DOE Activities
- DOE-NE-STD-1004-92, Root Cause Analysis Guidance Document
- DOE Order 225.1, Accident Investigations
- DOE Order 232.1A, Occurrence Reporting and Processing of Operations Information
- DOE Order M 232.1A, Occurrence Reporting and Processing of Operations Information
- DOE Order 5400.5, Radiation Protection of the Public and Environment
- DOE Order 151.1, Comprehensive Emergency Management System
- DOE/WIPP 2065, WIPP Safety Analysis Report
- WP 12-9, Emergency Plan and Procedures
- WP 13-1, WID Quality Assurance Program Description

REFERENCED

- WP 15-MD3102, Event Investigation and Root Cause Analysis
- WP 12 ER-3904, Categorization and Classification Of Operational Emergencies

PERFORMANCE

1.0 DISCOVERY OF OCCURRENCE

- 1.1 FM/FMD, when notified of an event, accumulate sufficient information to make an informed categorization, within two hours of an event's identification (identification is defined as the time the Central Monitoring Room is informed of the event).

If the event falls below the reporting thresholds required by this procedure, the FM/FMD will inform the Facility Representative (FR) and the Responsible Manager (RM) by the close of the next working day or within 80 hours of the event. The RM will review the event, and at his/her discretion, initiate an internal investigation in accordance with WP 15-MD3102.

For similar occurrences previously documented in a Non-Finalized Occurrence Report or similar occurrences previously documented in an approved Final Report, the FM/FMD, with concurrence from the FR, may submit a Roll-Up Report in lieu of a new Occurrence Report.

If the category is not clear or the occurrence exceeds the threshold of more than one criteria, the FM/FMD shall categorize the occurrence at the higher level being considered and DOE notified in accordance with this procedure. The occurrence categorization shall either be elevated, maintained, or lowered as information is made available. Any changes in categorization shall be documented in an Update Report and submitted before the close of the next working day from the time of recategorization (not to exceed 80 hours). A justification for the new categorization shall be included in the report.

- 1.2 Crisis Manager, classify events as Operational Emergencies per the requirements of WP 12 ER-3904, Categorization and Classification Of Operational Emergencies.

If the event is classified as an Operational Emergency, the Crisis Manager will direct the FM/FMD to use WP Form 2166 (Attachment 2), to orally notify the on-call FR, the DOE HQ Emergency Operations Center (EOC) (202-586-8100), and the Albuquerque Operations Center (505-845-4667) within 15 minutes of classification. A Notification Report shall be prepared and submitted before the close of the next working day from the time of categorization (not to exceed 80 hours). The completed Attachment 2 will be given to the Occurrence Reporting Coordinator (ORC) as soon as practical or by the close of the next working day.

Notification to DOE Headquarters EOC may be made by facsimile (202-586-8485). Facsimile transmitted reports must be confirmed by phone to ensure receipt and document the time of official notification.

All information should be clear and succinct. Avoid jargon. Uncommon or facility/site-specific abbreviations and acronyms should be fully described.

- 1.3 FM/FMD, using WP Form 2166 (Attachment 2) orally notify the on-call FR, the DOE HQ EOC (202-586-8100), and the Albuquerque Operations Center (505-845-4667) within 2 hours of categorization for Unusual Occurrences.

A Notification Report shall be prepared and submitted before the close of the next working day from the time of categorization (not to exceed 80 hours). The completed Attachment 2 will be given to the ORC as soon as practical or by the close of the next working day.

Notification to DOE Headquarters EOC may be made by facsimile (202-586-8485). Facsimile transmitted reports must be confirmed by phone to ensure receipt and document the time of official notification.

All information should be clear and succinct. Avoid jargon. Uncommon or facility/site-specific abbreviations and acronyms should be fully described.

- 1.4 FM/FMD, notify the responsible manager based on the nature of the occurrence as soon as practical following an Emergency, Unusual Occurrence, or Off-Normal categorization.

- 1.5 FM/FMD, notify the FR prior to preparing the Notification Report for Off-Normal Occurrences.

A Notification Report shall be prepared and submitted before the close of the next working day from the time of categorization (not to exceed 80 hours).

- 1.6 FM/FMD, make follow-up oral notification to the FR, the DOE HQ EOC (202-586-8100), and the Albuquerque Operations Center (505-845-4667) as soon as practical, but no later than two hours after any of the following:

- Any Off-Normal Occurrence upgraded to an Unusual Occurrence
- Any further degradation in the level of safety of the facility or other worsening conditions subsequent to the previous notification, including upgrading to an Emergency in accordance with the requirements of WP 12 ER-3904.
- Any change from one emergency class (per the requirements of WP 12 ER-3904).
- Termination of an emergency.

- 1.7 FM/FMD, after the occurrence, immediately initiate the collection of information pertaining to the event with the assistance of the Facility Shift Manager and initiate an investigation per the requirements of WP 15-MD3102, Event Investigation and Root Cause Analysis.

The FM/FMD should consider a graded approach when determining the level of effort required to investigate the cause of an occurrence. The graded approach is based on the severity or risk associated with the event.

2.0 PREPARATION OF NOTIFICATION REPORT

NOT

Occurrence reports not submitted within the time frame established in DOE Order 232.1A should include an explanation for the deviation.

Any changes in categorization shall be documented in an Update Report and submitted before the close of the next working day from the time of recategorization (not to exceed 80 hours). A justification for the new categorization shall be included in the report.

To cancel an Occurrence Report, check the block under Report Type for Final Report as well as the block for canceled under occurrence category (Item 3) on the Occurrence Reporting and Processing System (ORPS) PC software. Canceled reports must be finalized and go through the same approval process as all other Occurrence Reports; however, Fields 20 through 35 are not required for canceled reports. Once signed by the DOE FR and Program Manager (PM), the Occurrence Report will be removed from the active data base.

- 2.1 FM/FMD, notify the FR of an occurrence prior to preparing the Notification Report.

Regardless of the occurrence categorization, the FM/FMD with assistance from the ORC shall complete the Items 1 through 19 and Item 25 of Attachment 3 using the ORPS PC Software program for the Notification Report. A Notification Report shall be prepared and submitted before the close of the next working day from the time of categorization (not to exceed 80 hours).

- 2.2 FMD, obtain approval of the Operations Manager and the Environmental Safety and Health (ES&H) Manager or their designees prior to uploading the Notification Report to the ORPS data base.

The approval will be documented by signing the ORPS-generated report.

- 2.3 FM/FMD, provide the approval documentation to the ORC for filing.

3.0 PREPARATION OF AN UPDATE REPORT

NOT

Any changes in categorization shall be documented in an Update Report and submitted before the close of the next working day from the time of recategorization (not to exceed 80 hours). A justification for the new categorization shall be included in the report.

When additional occurrences are to be included in a Roll-Up Report, an Update Report shall be submitted by the close of the next working day from the time of categorization (not to exceed 80 hours).

To cancel an Occurrence Report, check the block under Report Type for Final Report as well as the block for canceled under occurrence category (Item 3) on the ORPS PC software. Canceled reports must be finalized and go through the same approval process as all other Occurrence Reports; however, Fields 20 through 35 are not required for canceled reports. Once signed by the DOE FR and PM, the Occurrence Report will be removed from the active data base.

- 3.1 FM/FMD, submit an Update Report into ORPS if there is any significant and new information about the occurrence, to include the status of the investigation.

Recurring consequences or the identification of additional component defects, resulting from the occurrence investigation, are activities associated with the occurrence and shall be included in Update Reports.

- 3.2 FM/FMD, notify the FR prior to uploading the Update Report.

The FM/FMD with assistance from the ORC shall complete all required fields of Attachment 3 using the ORPS PC Software program for the Update Report.

- 3.3 FM/FMD, obtain the approval of the Operations Manager and the ES&H Manager or their designees prior to uploading the Update Report to the ORPS data base.

The approval will be documented by signing the ORPS generated report.

- 3.4 FM/FMD, provide the approval documentation to the ORC for filing.

4.0 PREPARATION OF FINAL REPORT

NOT

If the required analysis cannot be completed within 45 calendar days after categorization, an Update Report shall be submitted within the 45 days. The Update Report shall explain the delay and provide an estimated date for submittal of the Final Report. This information shall be reported in the "Evaluation" block of the Occurrence Report.

To cancel an Occurrence Report, check the block under Report Type for Final Report as well as the block for canceled under occurrence category (Item 3) on the ORPS PC software. Canceled reports must be finalized and go through the same approval process as all other Occurrence Reports; however, Fields 20 through 35 are not required for canceled reports. Once signed by the DOE FR and PM, the Occurrence Report will be removed from the active data base.

- 4.1 FM/FMD, prepare the Final Report when an analysis of the occurrence has been completed, root cause, contributing cause(s), direct cause(s) identified, corrective action(s) to be taken to correct the condition and prevent recurrence scheduled, and lessons learned identified.

The FM/FMD, with assistance from the ORC, shall complete all required fields of Attachment 3 using the ORPS PC Software program for the Final Report. A Final Occurrence Report shall be prepared as soon as practical but within 45 calendar days of categorization of the occurrence.

- 4.2 FM/FMD, notify the FR prior to uploading the Final Report.
- 4.3 FM/FMD, obtain the approval of the Operations Manager and the ES&H Manager or their designees prior to uploading the Final Occurrence Report to the ORPS data base.

The approval will be documented by signing the ORPS generated report.

- 4.4 FM/FMD, provide the approval documentation to the ORC for filing.

5.0 FINAL REPORTS NOT APPROVED

- 5.1 If the Final Report is not approved by the FR or the PM, the report shall be returned to the FM/FMD with an explanation of the disapproval.

The revised Final Report shall be resubmitted within 21 calendar days of disapproval. If it can not be resubmitted within this time, an Update Report shall be submitted within the 21 calendar days explaining the delay and providing an estimated date for resubmittal of the Final Report. This information shall be reported in the "Evaluation" block of the Occurrence Report.

6.0 ROLL-UP OCCURRENCE REPORTS FOR OFF-NORMAL OCCURRENCES

- 6.1 FM/FMD, create a Roll-Up Report for similar occurrences previously documented in Non-Finalized Occurrence Report.

A Roll-Up Report can be submitted in lieu of a new occurrence report when a similar reportable event occurs and the previously uploaded final occurrence report documenting the similar type event has not been finalized. The Roll-Up Report will be completed per the instructions in Attachment 5. A Roll-Up Report can only be issued when the conditions listed below have been met.

- a. An Occurrence Report has been initiated, to include notification or Update Reports, but not finalized.
- b. The preliminary investigation identifies the subsequent occurrence to be similar and have the same root cause code.
- c. The preliminary investigation identifies the subsequent occurrence to have the same or similar direct and contributing causes as the initial occurrence.
- d. The preliminary corrective actions for the initial occurrence are expected to correct the same root cause type of failure.
- e. Appropriate corrective actions have been added to address direct and/or contributing causes identified for each new occurrence added to the report.
- f. The FR and PM (and EM-76 for transportation reports), agree to include these occurrences in a Roll-Up Report.
- g. The FR agrees to the addition of each new occurrence.
- h. The notification of the added occurrence is made through the issuance of an Update Report within the normal time period required for issuance of a Notification Report, changing Field #4 appropriately (Attachment 3).

- 6.2 FM/FMD, Create a Roll-Up Report for similar occurrences previously documented in an approved Final Report.

A Roll-Up Report can be submitted in lieu of a new Notification Report for those occurrences that meet the threshold requirements of Attachment 1 for which a Final Report has been approved by DOE. The Roll-Up Report will be completed per the instructions in Attachment 5. A Roll-Up Report can only be issued when the conditions listed below have been met.

- a. A Final Report has been approved by the DOE FR or PM to include the corrective action(s) and associated schedules for implementation.
- b. Similar occurrences with the same root cause and corrective actions occur in the time between the approval of the original Occurrence Report and completion of the corrective actions identified therein.
- c. The FR and PM (and EM-76 for transportation reports), agree to include these occurrences in a Roll-Up Report.
- d. Notification of the new occurrence is complete through the issuance of a notification report that references the previous report.
- e. The DOE FR agrees to the addition of each new occurrence.
- f. Notification of the added occurrence is completed through the issuance of an Update Report in accordance with the normal time period required for issuance of a Notification Report, changing Field #4 appropriately (Attachment 3).
- g. Once the original approved Final Report corrective actions are completed (e.g., new system is installed and operating), a Final Report must be submitted for any open Roll-Up Reports referencing this original Occurrence Report as justification for a Roll-Up Report. This original approved Final Report cannot be used as the basis for future Roll-Up Reports, i.e., subsequent occurrences must be reported individually in compliance with this procedure.

- 6.3 FMD, obtain the approval of the Operations Manager and the ES&H Manager or their designees prior to uploading the Roll-Up Occurrence Report to the ORPS data base.

The approval will be documented by signing the ORPS generated report.

7.0 DISTRIBUTION OF FINAL OCCURRENCE REPORTS TO PUBLIC READING ROOMS

- 7.1 ORC, scan the ORPS data base for final WIPP occurrence reports.

- 7.2 ORC, review all final occurrence reports and remove the following information:
- Information considered trade secrets, or commercial and financial information obtained as personal or business, privileged or confidential
 - Information which may be considered predecisional and deliberative
 - Information of a personal or private nature which constitutes an invasion of individual privacy, such as a person's name or information which could lead the reader to identify the individual involved
 - Information compiled for law enforcement purposes

- 7.3 ORC, deliver to the DOE WIPP Public Affairs Officer a sanitized version of the Final Occurrence Report.

The ORC will inform the DOE WIPP Public Affairs Officer of the date on which the report should be delivered to the WIPP Public Reading Rooms and DOE Headquarters reading room. The DOE WIPP Public Affairs Officer should review the revised Final Occurrence Report and deliver the report to Documents Services section for final distribution.

NOT

The Final Occurrence Report review must be made so Document Services can forward the report to the WIPP Public Reading Rooms and DOE Headquarters reading room within two weeks after the report has been approved by the DOE PM.

- 7.4 Document Services, forward a copy of the Final Occurrence Report to the WIPP Public Reading Rooms and DOE Headquarters reading room.

Attachment 1 - Categorization of Reportable Occurrence by Group

GROUP 1. FACILITY CONDITION

A. NUCLEAR CRITICALITY SAFETY

Nuclear criticality is not achievable at the WIPP with the type and quantity of materials to be received. Material receipt is controlled by the SAR and the WIPP Waste Acceptance Criteria.

B. FIRES/EXPLOSIONS

Unusual Occurrence

- (1) Any fire or explosion inside a radioactive waste container.

Off-Normal

- (1) Any fire or explosion not required to be reported as an Unusual Occurrence that activates a fire suppression system (fire suppression systems on mobile equipment is excluded from this category) or disrupts the handling of TRU waste.
- (2) Any unplanned facility fire that takes longer than 10 minutes to extinguish following the arrival of fire protection personnel. This does not include fires that do not disrupt normal facility operations and which are in the initial or beginning stage that can be controlled or extinguished by portable fire extinguishers, Class II standpipe, or small hose system without the need for protective clothing or breathing apparatus.

C. SAFETY STATUS DEGRADATION

Unusual Occurrence

- (1) Any violation of an approved Administrative Control described in Section 5 of Attachment 1 of the WIPP SAR.
- (2) Discovery of an incorrectly derived Administrative Control as defined in the WIPP SAR.
- (3) Any operation outside the design basis of the facility or process.
- (4) Any occurrence that will prevent immediate facility or off-site emergency response capabilities.

Attachment 1 - Categorization of Reportable Occurrence by Group

NOT

Failure of all methods of communications to the underground, surface, or off-site that prevents the response of emergency capabilities will be considered reportable under this sub-category.

NOT

Failure of the emergency response capabilities to respond to an occurrence within 15 minutes of being authorized to respond will be considered an occurrence under this sub-category.

NOT

It will not be considered an occurrence under this sub-category if emergency response capabilities are not dispatched to off-site emergencies (non WIPP related) per the direction of the WIPP management.

NOT

It will not be considered an occurrence if the WIPP Underground Mine Rescue Team does not respond immediately. The Underground Mine Rescue Team is not considered an immediate emergency response team.

- (5) Discovery of an actual Unreviewed Safety Question which reveals a currently existing inadequacy in the approved design basis.

Off-Normal

- (1) Discovery of a condition that leads the facility operating personnel to limit waste handling operations, either self-imposed or due to the identification of a potential degradation of the authorization bases of a facility or process. This includes the discovery of analytical errors, omissions or inadequacies that present the potential for a USQ.
- (2) Discovery of a potential Unreviewed Safety Question that could affect the present or future operation of the facility. Routine USQ determinations due to planned system or operational modifications are not reportable under this criteria.

Attachment 1 - Categorization of Reportable Occurrence by Group

D. LOSS OF CONTROL OF RADIOACTIVE MATERIAL / SPREAD OF RADIOACTIVE CONTAMINATION

NOT

The Radiological Control Manager will provide the information necessary, and will assist in categorization of any event within this group.

NOT

Refer to Attachment 4 for guidance on completing an Occurrence Report when an event has been categorized within this group.

Unusual Occurrence

- (1) Identification of radioactive contamination offsite in excess of 100 times any of the surface contamination levels specified in DOE 5400.5, "Radiation Protection of the Public and the Environment, Figure IV-1, that has not been previously identified and formally documented. For Transuranics, use the values specified in Table 1 of the EH-412 memorandum, "Application of DOE 5400.5 Requirements for Release and Control of Property Containing Residual Radioactive Material", dated November 17, 1995.
- (2) Loss of accountability of a sealed or unsealed radioactive source that exceeds 100 times the quantities specified in DOE N 441.1, "Radiological Protection for DOE Activities."
- (3) Not applicable to the WIPP. This item addresses fissile material which is not available at the WIPP.

Off-Normal

- (1) Any unplanned spill of liquids in excess of one gallon contaminated with radioactive material in concentrations greater than five times the Derived Concentration Guide values listed in DOE 5400.5, Figure III-1.
- (2) Identification of radioactive contamination outside a radiological area or radiological buffer area established for contamination control, but within a Controlled Area, in excess of 10 times the total contamination levels in 10 CFR 835, Appendix D.
- (3) Identification of radioactive contamination on-site that is not located within a controlled area, and is in excess of 2 times the contamination levels in 10 CFR 835, Appendix D.

Attachment 1 - Categorization of Reportable Occurrence by Group

- (4) Identification of radioactive contamination off-site in excess of the contamination levels specified in DOE 5400.5, Figure IV-1, that has not been previously identified and formally documented.
- (5) Loss of accountability of a sealed or unsealed radioactive source that exceeds 10 times and is less than or equal to 100 times the quantities specified in DOE N 441.1, Radiological Protection for DOE Activities.
- (6) Loss of accountability of a sealed or unsealed radioactive source that is less than or equal to ten times the quantities specified in DOE N 441.1, Radiological Protection for DOE Activities.

E. SAFETY STRUCTURE/SYSTEM/COMPONENT DEGRADATION.

NOT

Not applicable to the WIPP. The WIPP does not have Structures, Systems, or Components (SSC) designation as Safety Class or Safety Significant.

F. VIOLATION/INADEQUATE PROCEDURES

Unusual Occurrence

- (1) Not applicable to the WIPP. The WIPP does not have Safety Class Systems.
- (2) Not applicable to the WIPP. The WIPP does not have Safety Class Systems.

Off-Normal

- (1) Any violation resulting in actual equipment damage in excess of \$10,000.
- (2) Use of inadequate procedures or deviation from written procedures that results in adverse effects on performance, safety, or reliability.
- (3) This item not applicable to WIPP. The WIPP has no Safety Significant SCC.

G. OVERSIGHT ACTIVITIES

NOT

Not applicable to the WIPP. The WIPP does not have Structures, Systems, or Components (SSC) designated as Safety Class or Safety Significant.

Attachment 1 - Categorization of Reportable Occurrence by Group

H. OPERATIONS

Unusual Occurrence

- (1) Not applicable to the WIPP. The WIPP does not have Safety Class Systems.
- (2) Not applicable to the WIPP. The WIPP does not have Safety Class Systems.
- (3) Weather conditions/natural phenomenon causing serious disruption of waste handling activities. This does not include precautionary stoppage of waste handling activities, or delays caused by subsequent facility inspections.
- (4) Loss of any process ventilation system (greater than two hours) sufficient to invert pressure zones (greater than 0.1 inches water gauge) when differential pressures are required to be in effect by operating procedures.
- (5) Any facility evacuation (excluding office space) as the result of an actual occurrence, not including a precautionary evacuation for an event that can be controlled and mitigated by employees or maintenance personnel.

Off-Normal

- (1) Any unplanned and unexpected change in a process condition or variable adversely affecting safety, security, environment, or health protection performance sufficient to require termination (stopping or putting on hold) of an operating procedure related to the flow path of radioactive waste processing for greater than 4 hours.

NOT

This does not apply when the procedure or plan governing performance of the procedure contains direction to stop or hold when certain conditions are encountered. This does not apply when stopping to clarify or question a procedure, retrieve tools, supplies, parts, respond to alarms or evacuations.

- (2) Any unplanned electrical outage or unexpected consequences from a planned outage which seriously disrupts waste handling operations (e.g., greater than one week).
- (3) Any unplanned outages of service systems (i.e., cooling water, phones, communication systems, etc.) or unexpected consequences from a planned outage which disrupt waste handling operations for more than one week and

Attachment 1 - Categorization of Reportable Occurrence by Group

which adversely affect safety, security, environment, or health protection performance.

- (4) Loss of any process ventilation system (greater than two hours) when differential pressures are required to be in effect by operating procedures.
- (5) This item is not applicable. WIPP has no Safety Significant SSC.

GROUP 2. ENVIRONMENTAL**NOT**

The Environment Compliance and Support (EC&S) Manager will provide necessary information to the FM/FMD and assist in making these categorizations.

A. RADIONUCLIDE RELEASESUnusual Occurrence

- (1) Release of radionuclide material that violates environmental requirements in Federal permits, Federal regulations, or DOE directives.
- (2) Release of radionuclide below Emergency levels, as defined in DOE Order 151.1, but which requires immediate (<4 hours) reporting to Federal regulatory authorities or triggers specific action levels for an outside Federal agency.

Off-Normal

- (1) Any release of radionuclide material to controlled or uncontrolled areas that is not part of a normal monitored release and exceeds 50 percent of a CERCLA RQ specified for such material per 40 CFR 302.
- (2) Not applicable to the WIPP. Radioactive materials are not released as a consequence of normal operations at the WIPP.
- (3) Any monitored facility or site boundary where exposure or concentrations significantly exceed what historical data and/or analysis show is expected as a result of normal operations.
- (4) Any detection of a radionuclide in a sanitary or storm sewer, waste or process stream, or any holding points where such a material is not expected. Detection means confirmation of radionuclide by analysis.

Attachment 1 - Categorization of Reportable Occurrence by Group

- (5) Any controlled, uncontrolled, or accidental release which is not classified as an Unusual Occurrence but which will be reported in writing to state/local agencies in a format other than routine periodic reports.

B. RELEASE OF HAZARDOUS SUBSTANCES/REGULATED POLLUTANTS/OIL

Unusual Occurrence

- (1) Release of a hazardous substance or regulated pollutant that exceeds a CERCLA RQ per 40 CFR 302 and 40 CFR 355 for chemicals and extremely hazardous substances.
- (2) Release below Emergency levels as defined by DOE Order 151.1, but requires immediate (<4 hours) reporting to Federal regulatory agencies or triggers specific action levels for an outside Federal agency.
- (3) Any oil release to the soil of 100 gallons or more.

Off-Normal

- (1) Release of a hazardous substance or regulated pollutant to controlled or uncontrolled areas that is not part of a normal, monitored release and exceeds 50 percent of a CERCLA RQ as specified for such material per 40 CFR 302. (For ethylene glycol, the reportable quantity is 5000 pounds.)
- (2) Any oil release to the soil greater than 42 gallons, but less than 100 gallons.
- (3) Any detection of a toxic or hazardous substance in a sanitary or storm sewer, waste or process stream, or any holding points where such a material is not expected. "Detection" means confirmation of toxic or hazardous substance by analysis.
- (4) Any controlled, uncontrolled, or accidental release which is not classified as an Unusual Occurrence but which will be reported in writing to state/local agencies in a format other than routine periodic reports.
- (5) Not applicable to the WIPP. Pollutants are not produced as a byproduct of normal operations at the WIPP.
- (6) Any general environmental monitoring where concentration increases to a level which exceeds what historical data and/or analysis shows is expected as a result of normal operations.

Attachment 1 - Categorization of Reportable Occurrence by Group

C. HAZARDOUS MATERIAL CONTAMINATION.

Unusual Occurrence

- (1) Discovery of on-site or off-site contamination due to DOE operations which does not represent an immediate threat to the public, but which exceeds a reportable quantity for such materials per 40 CFR 302.
- (2) Discovery of ground water contamination that is not part of an existing plume previously identified in either an annual report or in any CERCLA/RCRA activity or report.

Off-Normal

- (1) Discovery of on-site contamination attributable to DOE operations that exceeds 50 percent of a reportable quantity for such material per 40 CFR 302.

D. ECOLOGICAL RESOURCES

Unusual Occurrence

- (1) Any occurrence causing significant impact to any ecological resource for which the DOE is a trustee (i.e., destruction of a critical habitat, damage to a historic/archeological site, damage to wetlands, etc.).

E. ENVIRONMENTAL AGREEMENT/COMPLIANCE ACTIVITIES

Unusual Occurrence

- (1) Any occurrence under any agreement or compliance area that requires notification of an outside regulatory agency within 4 hours or less, or triggers an outside regulatory agency action level.

Off-Normal

- (1) Any agreement, compliance, remediation, or permit-mandated activity for which formal notification of enforcement has been received from the relevant regulatory agency that the facility is considered not to be in compliance with a schedule or requirement (e.g., Notice of Violation, Notice of Deficiency, Notice of Intent to Sue, and other types of enforcement actions).

Attachment 1 - Categorization of Reportable Occurrence by Group

NOT

MSHA CAV's issued as a result of an assist visit are not reportable under this group.

- (2) Any occurrence under any agreement or compliance area that will be reported to outside agencies in a format other than routine periodic reports.

Attachment 1 - Categorization of Reportable Occurrence by Group

GROUP 3. PERSONNEL SAFETY**NOT**

The Industrial Safety Manager will provide the FM/FMD with the necessary information and assistance in making these categorizations.

A. OCCUPATIONAL ILLNESS/INJURIESUnusual Occurrence

- (1) Any occurrence due to DOE operations resulting in a fatality or terminal injury or illness.
- (2) Any one occurrence resulting in three or more lost workday cases as defined by 29 CFR 1904.12.
- (3) Any occurrence requiring inpatient hospitalization of three or more personnel or which has a high probability of resulting in a permanent disability.
- (4) Personnel exposures to sufficient levels of hazardous substances or hazards that require the administration of medical treatment on the same work day as the exposure and are above limits established by OSHA (see 29 CFR 1910, subpart z) or American Conference of Governmental Industrial Hygienists (ACGIH), whichever is lower.
- (5) Exposures to an immediately dangerous to life and health (IDLH) (as defined by 29 CFR 1910.120) condition without both appropriate personal protective equipment and procedures in place.

Off-Normal

- (1) Any occupational illness or injury that results in inpatient hospitalization.
- (2) Series of occupational illnesses from one event involving three or more people where at least one is a lost work day case.
- (3) Personnel exposure in a single event to hazardous substances or hazards in excess of limits established by OSHA (29 CFR 1910) or ACGIH, whichever is lower.

Attachment 1 - Categorization of Reportable Occurrence by Group

B. VEHICULAR INCIDENTS

NOT

This section covers occupational vehicular related transportation incidents. Group 6 should also be considered in categorization for reporting. Transportation incidents without injury (e.g., those involving hazardous or radioactive material or financial loss) must be reported per requirements of Group 6 or 7.

Unusual Occurrence

- (1) Any vehicular incident due to DOE operations resulting in fatality(s), injury(s), or illness classified under Group 3, Section A - Unusual Occurrence requirements.
- (2) Any vehicle incident involving Departmental property with a fatality(s) to a person(s) other than DOE personnel or DOE contractor personnel.

Off-Normal

- (1) Any vehicular incident with injury(s) involving Departmental property resulting in a lost workday case.
- (2) Any vehicular incident involving Departmental property with injury(s) to a person(s) other than DOE personnel or DOE contractor personnel.

C. SAFETY CONCERNS

Off-Normal

- (1) Unapproved use of flammable, toxic, explosive, corrosive, or other unsafe or dangerous process, chemicals, materials, or methods not in accordance with standard operating procedures or work plans.
- (2) Any shutdown of a work activity taken as a result of an OSHA violation (e.g., trenching without adequate shoring or working at levels without fall protection).

Attachment 1 - Categorization of Reportable Occurrence by Group

GROUP 4. PERSONNEL RADIOLOGICAL PROTECTION**A. RADIATION EXPOSURE****NOT**

Unless specified otherwise, all doses specified in the following requirements are calculated as the sum of the committed effective dose equivalent due to radionuclide taken into the body (internal exposure) and the dose equivalent due to external exposure.

NOT

The Radiological Control Manager will provide necessary information to the FM/FMD and assist in making these categorizations.

Unusual Occurrence

- (1) Determination of a dose that exceeds the limits specified in 10 CFR 835, Subpart C, "Occupational Radiation Protection," for onsite exposure, or DOE 5400.5, Chapter II, Section 1 for offsite exposures to a member of the public.

Off-Normal

- (1) Any single occupational exposure that exceeds an expected exposure by 100 mrem.
- (2) A single unplanned exposure onsite to a minor, or member of the public that exceeds 50 mrem.
- (3) Determination of a dose that exceeds the reporting requirements thresholds specified in DOE 5400.5, Chapter II, Section 7, for offsite exposures to a member of the public.

B. PERSONNEL CONTAMINATION**NOT**

Personnel contamination includes those cases in excess of 20 dpm alpha or 200 dpm beta/gamma occurring as a result of WIPP activities. This does not include cases involving naturally occurring radioactivity (radon, thorium, etc.) or activated noble gases (argon, krypton, etc.). This does not include contamination detected on site-issued protective clothing.

Attachment 1 - Categorization of Reportable Occurrence by Group

NOT

Refer to Attachment 4 for guidance on completing an Occurrence Report when an event has been categorized within this group.

Unusual Occurrence

- (1) Any one occurrence that results in five or more individual contamination cases. An occurrence is individual skin and/or personal effects contamination.
- (2) Any occurrence requiring off-site medical assistance for contaminated personnel.
- (3) Identification of radioactive contamination on personnel or clothing off site due to DOE operations.

Off-Normal

- (1) Personnel or clothing contamination at a level equal to or exceeding five times the total contamination limits identified in 10 CFR 835, Appendix D.
- (2) Personnel or clothing contamination at a level less than five times the total contamination limits identified in 10 CFR 835, Appendix D..

Attachment 1 - Categorization of Reportable Occurrence by Group

GROUP 5. SAFEGUARDS AND SECURITY**A. CRIMINAL ACTS**Unusual Occurrence

- (1) Occurrences on-site or at any of the facilities in town under DOE jurisdiction or administration regarding:
 - (a) Bomb-related incidents, including location of a suspicious device or a noncredible bomb threat
 - (b) A noncredible terrorist threat
 - (c) A noncredible sabotage threat
- (2) Violent assault/battery, murder, or unjustified use of deadly force on DOE property.
- (3) Theft/diversion/intentional destruction of Government property valued greater than \$1,000,000.
- (4) Racketeering or other organized criminal activity.

Off-Normal

- (1) Items 1a, 1b, and 1c are not applicable to the WIPP. The WIPP is a non-reactor nuclear facility.
- (2) Theft/diversion/intentional destruction of Government property valued between \$10,000 and \$1,000,000).
- (3) Felony conspiracies (i.e., blackmail, fraud, embezzlement, extortion and forgery) not involving classified information.

B. UNACCOUNTED-FOR CLASSIFIED MATTER OR COMPROMISED INFORMATION**NOT**

This category does not apply to the WIPP, as no classified information is generated or used.

C. SUBSTANCE ABUSEOff-Normal

- (1) Any reportable occurrence at least partially attributable to the use of alcohol or illegal drugs.

Attachment 1 - Categorization of Reportable Occurrence by Group

- (2) A detection of personnel not fit for duty attributable to the use of alcohol or illegal drugs.

D. INTELLIGENCE ACTIVITIES

Unusual Occurrence

- (1) Extortion/blackmail directed at DOE or DOE contractor personnel with intent of obtaining detailed information concerning plant processes/configurations, or aiding in sabotage or terrorist acts.
- (2) Espionage, intelligence activities, treason, or subversive activities by or directed at DOE or DOE contractor personnel.

Off-Normal

- (1) Not applicable to the WIPP. WIPP has no classified or sensitive information.
- (2) DOE or DOE contractor personnel believe that they may be the target of an attempted exploitation.

E. PHYSICAL SECURITY SYSTEM COMPUTER

NOT

This category does not apply to the WIPP.

F. UNPLANNED/UNSCHEDULED OUTAGE OF SITE SECURITY SYSTEM

NOT

This category does not apply to the WIPP.

G. DEMONSTRATIONS/PROTESTS

Unusual Occurrence

- (1) Disruptive activities impeding vehicular or employees access/egress.
- (2) Attempted or actual trespass, interpreted as protesters attempting or gaining access into the fenced facility perimeter.
- (3) Malevolent activities causing property damage or bodily harm.

Off-Normal

- (1) Lawful activities warranting deployment of additional protective measures.

Attachment 1 - Categorization of Reportable Occurrence by Group

H. FIREARMS

NOT

This category is not applicable at the WIPP as security forces do not possess firearms. Unauthorized introduction of firearms to the site is covered in Section I below, Off-Normal event.

I. OTHER SECURITY CONCERNS

Unusual Occurrence

- (1) Unauthorized use, possession, or alteration of a security badge, credentials, or other form of official identification (including blank badge stock) to gain access to an area under DOE administrative control.

Off-Normal

- (1) Discovery of prohibited items within the fenced facility area that are suspected of being positioned for the purpose of aiding and abetting a malevolent act or are, of themselves, illegal. Items discovered outside the fenced area that are legal under Federal, State, and local laws are not reportable.
- (2) On-site death of cleared DOE or DOE contractor personnel by unnatural causes (e.g., suicide, drug overdose).
- (3) Loss of security picture badges in excess of 5 percent in a calendar year.
- (4) On-site malicious mischief, disorderly conduct, or vandalism which disrupt plant activity (prevent waste handling) or causes damage between \$10,000-\$100,000.

J. MATERIAL CONTROL AND ACCOUNTABILITY

NOT

The WIPP does not have special nuclear materials. This section does not apply.

Attachment 1 - Categorization of Reportable Occurrence by Group

GROUP 6. TRANSPORTATION**NOT**

Shippers are responsible for occurrences involving their shipments. DOE organizations receiving hazardous materials from a DOE shipper that are not in compliance with appropriate requirements, must report the discrepancies to the DOE shipper who will prepare an Occurrence Report and implement suitable corrective actions.

If an out-of-compliance shipment is received from a non-DOE shipper, the DOE recipient shall notify the non-DOE shipper of the discrepancy and shall prepare an Occurrence Report in accordance with this procedure. These reports must contain a statement that the non-DOE shipper has been notified, and identify any corrective actions taken or planned to eliminate the occurrence from being repeated.

The WID FMD will only be responsible for the categorization and report preparation for those events involving TRU-activities originating at the WIPP. Events involving TRU waste shipments originating from other DOE facilities to the WIPP will be categorized and reported by the facility originating the shipments.

As the Contract Administrator, the WID does have reporting responsibility for events involving the improper use and maintenance of equipment owned or operated by the contracted carrier. (e.g. TRUPAC haul trailers and tractors)

Unusual Occurrence

- (1) Any packaging or transportation activity involving the offsite release of radioactive material, etiologic agents, a reportable quantity of hazardous substance, or marine pollutants.
- (2) Any radioactive material shipment that arrives at its destination with radiation or contamination levels in excess of DOT allowable limits, or results in personnel radiation exposure higher than permitted in Federal permits, Federal regulations, or DOE standards.
- (3) Any shipment or onsite transfer of radioactive material or hazardous waste that arrives at its destination with an unaccounted for package or an irreconcilable shipping paper, waste manifest, or onsite transfer authorization.

Attachment 1 - Categorization of Reportable Occurrence by Group

- (4) A vehicle accident (without personal injury) that presents significant impact on the ability of WIPP to conduct transportation operations and:
 - (a) results in release of radioactive or hazardous materials above Federal permit, Federal regulatory, or DOE Standard limits;
 - (b) Involves performance degradation of safety equipment, or
 - (c) is the result of failure or degradation of administrative controls required to ensure safety.
- (5) Violations of the Federal Motor Carrier Safety Regulations or the Hazardous Materials Regulations if those violations are determined by DOT inspection and result in a monetary penalty.

Off-Normal

- (1) Any packaging or transportation activity involving:
 - (a) the offsite release of nonradioactive hazardous material, or any quantity of hazardous waste; or
 - (b) the onsite release of radioactive materials, etiologic agents, hazardous substances, hazardous waste, or marine pollutants.
- (2) A vehicle accident (without personal injury) that affects the ability of WIPP to conduct transportation operations and:
 - (a) results in release of radioactive or hazardous materials below limits established by Federal permits, Federal regulations, or DOE Standard limits, but must be reported to State agencies; or
 - (b) is the result of operational procedural violations, including maintenance or administrative procedures.
- (3) Noncompliance (potential violations) of the DOT Hazardous Materials Regulations or the transportation and packaging requirements of the Nuclear Regulatory Commission involving:
 - (a) errors made by the shipper in materials description, marking, labeling, or placarding;
 - (b) an unqualified person signing shipping papers;

Attachment 1 - Categorization of Reportable Occurrence by Group

- (c) the highway routing selection requirements for highway route controlled shipments not being observed;
 - (d) the separation and segregation tables for hazardous materials not strictly adhered to; or
 - (e) the applicable packaging requirements for the assembly, handling, or selection of a package not being in accordance with the applicable regulations.
- (4) Noncompliance (potential violations) of the Federal Motor Carrier Safety Regulations involving:
- (a) A contractor driver operating a DOE-owned vehicle after a positive drug test or failure of an alcohol test;
 - (b) An unqualified driver operating a vehicle (medical, driver's license, or training not in compliance);
 - (c) The carrier not having required insurance;
 - (d) a vehicle that failed inspection not being removed from service;
 - (e) a specification cargo tank with expired inspection being in service; or
 - (f) a driver's log book deliberately misrepresented;
 - (g) the contract carrier failing to perform random or periodic drug or substance-abuse testing.
- (5) Violations of the Federal Motor Carrier Safety Regulations or the Hazardous Materials Regulations if those violations are determined by DOT inspection and do not result in a penalty.

Attachment 1 - Categorization of Reportable Occurrence by Group

GROUP 7. VALUE BASIS REPORTING**NOT**

Value basis reporting includes items based on cost or the identification of defective items, materials, or services. Defective items are reported to allow the initiation of a DOE investigation and initiate actions to eliminate common mode failures due to substandard, counterfeit, misrepresentation, or fraudulent practices of suppliers.

A. COST BASED OCCURRENCESUnusual Occurrence

- (1) Estimated loss or damage to Department of Energy or other property amounting to \$1,000,000 or more, or estimated costs of \$1,000,000 or more required for cleaning (including decontamination), renovating, replacing, or rehabilitating structures, equipment, or property.

Off-Normal

- (1) Estimated loss or damage to Department of Energy or other property amounting to between \$10,000 and \$1,000,000 (for DOE vehicles the lower limit is \$5000 or, for insurance purposes, considered a total loss) or estimated costs within these limits required for cleaning (including decontamination), renovating, replacing, or rehabilitating structures, equipment, or property.

B. DEFECTIVE ITEM, MATERIAL, OR SERVICEOff-Normal

- (1) Discovery of an actual or potential defective item, material, or service including any suspect, counterfeit, or substandard product in any application whose failure could result in a substantial safety hazard. Examples include counterfeit components found in:
 - (a) Cranes, elevators, and forklifts: items used in the critical load bearing path of such handling and lifting equipment.
 - (b) Not applicable to the WIPP. The WIPP does not operate aircraft.
 - (c) Vehicles: items used in engines, brakes, or steering mechanisms.
 - (d) Critical components used in personnel safety equipment.
 - (e) Items used to contain hazardous material.
- (2) Discovery of an actual or potential defective item, material, or service including any suspect, counterfeit, or substandard product in any application whose failure could not result in a substantial safety hazard. This does not include office supplies, equipment, or household products.

Attachment 1 - Categorization of Reportable Occurrence by Group

GROUP 8. FACILITY STATUS**A. FACILITY/PROCESS/ACTIVITY UNSCHEDULED SHUTDOWN**Off-Normal

- (1) Any unscheduled facility shutdown, process or activity that resulted, or may result in the failure to meet approved performance goals.

B. EXISTING FACILITY/PROCESS/ACTIVITY SHUTDOWN EXTENSIONOff-Normal

- (1) Any increase in an approved shutdown schedule of 1 month or greater or that resulted, or may result in the failure to meet approved performance goals for an existing facility, process or activity.

C. NEW FACILITY/PROCESS/ACTIVITY START-UP DELAYOff-Normal

- (1) Any delay in an approved start-up schedule of 1 month or greater, and which resulted, or may result in the failure to meet approved performance goals for a new facility, process, or activity.

Attachment 1 - Categorization of Reportable Occurrence by Group

GROUP 9. NUCLEAR EXPLOSIVE SAFETY**NOT**

This group does not apply to the WIPP.

Attachment 1 - Categorization of Reportable Occurrence by Group

GROUP 10. CROSS-CATEGORY ITEMS**A. COLLECTIVELY SIGNIFICANT RELATED OCCURRENCES**

A series of related occurrences which individually do not warrant reporting under preceding criteria, but which collectively are considered significant enough to warrant reporting. This will normally be determined during review of an incident, similar occurrences, root causes, and trending process. The categorization level will depend on the seriousness of the incidents reviewed.

NOT

Categorization as Unusual Occurrence or Off-Normal is determined by the FM/FMD.

B. NEAR MISSUnusual Occurrence

- (1) A near miss to one of the reporting categories where the conditions necessary to cause an Unusual Occurrence existed (i.e., all barriers to event initiation were compromised).

Off-Normal

- (1) A near miss to one of the reporting categories where the conditions necessary to cause an Off-Normal Occurrence existed (i.e., all barriers to event initiation were compromised).
- (2) A near miss to one of the reporting categories where the conditions necessary to cause a reportable occurrence were prevented from existing by only one remaining barrier after other barriers had been compromised (i.e., one additional independent failure/degradation was necessary for event initiation to be possible).

C. POTENTIAL CONCERNS/ISSUESUnusual Occurrence

- (1) An occurrence that may result in a significant concern, particularly in the off-site transportation and radiological areas, by the press or general population or could damage the credibility of the Department.
- (2) Other events as determined by the FM/FMD.

Off-Normal

- (1) Any event resulting in the initiation of a Type A or B investigation as categorized by DOE Order 225.1, "Accident Investigations."
- (2) Other events as determined by the FM/FMD.

Attachment 2 - Oral Notification For

NOT

This form will be used to report Operational Emergencies or Unusual Occurrences to DOE HQ. When reporting Hazardous Material Operational Emergencies be sure to inform DOE HQ the Operational Emergency has been classified as one of the following: Alert, Site Area Emergency or General Emergency".

DOE HQ EOC 202-586-8100 FAX 202-586-8485	AL Operations Center 505-845-4667
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1. Name of Facility: WIPP

2. Facility Function: Nuclear Waste Operation

3. Name and telephone # of FMD:

4. Occurrence Report Number: ALO--WWID-WIPP-199x-xx

5. Occurrence Category: Emergency Unusual Off-Normal

6. Division or project: WID/WIPP

7. DOE Secretarial Office: EM

8. Systems, Bldg., or Equipment:

9. UCNI: No __ Yes__

10. Plant Area: _____

11. Date and Time Discovered:

12. Date and Time Categorized:

13. DOE Notification: _____

14. Other Notifications: _____

Attachment 2 - Oral Notification For

15. Subject or Title Occurrence: _____

16. Nature of Occurrence: (check up to three)

Group 1. Facility Condition

- a. Nuclear Criticality Safety
- b. Fires/Explosions
- c. Safety Status Degradation
- d. Loss of Control of Radioactive Material/Spread of Contamination
- e. Safety Structure/System/Component Degradation
- f. Violation/Inadequate Procedures
- g. Oversight Activities
- h. Operations

Group 2. Environmental

- a. Radionuclide Releases
- b. Release of Hazardous Substances/Regulated Pollutants/Oil
- c. Hazardous Material Contamination
- d. Ecological Resources
- e. Environmental Agreement/Compliance Activities

Group 3. Personnel Safety

- a. Occupational Illness/Injuries
- b. Vehicular Incidents
- c. Safety Concerns

Group 4. Personnel Radiological Protection

- a. Radiation Exposure
- b. Personnel Contamination

Attachment 2 - Oral Notification For

Group 5. Safeguards and Security

- a. Criminal Acts
- b. Unaccounted for Classified Matter/Compromised Information
- c. Substance Abuse
- d. Intelligence Activities
- e. Physical Security System Computer
- f. Unplanned/Unscheduled Outage of Site Security System
- g. Demonstrations/Protests
- h. Firearms
- i. Other Security Concerns
- j. Material Control and Accountability

Group 6. TransportationGroup 7. Value Basis Reporting

- a. Cost Based
- b. Defective Item, Material, or Service

Group 8. Facility Status

- a. Facility/Process/Activity Unscheduled Shutdown
- b. Existing Facility/Process/Activity Shutdown Extension
- c. New Facility/Process/Activity Start-up Delay

Group 9. Nuclear Explosive SafetyGroup 10. Cross-Category Items

- a. Collectively Significant Related Occurrences
- b. Near Miss Occurrences
- c. Potential Concerns/Issues

17. Description of Occurrence: _____

18. Operating Conditions of Facility at Time of Occurrence: _____

Attachment 2 - Oral Notification For

19. Activity Category: (check only one)

- a. Construction
- b. Maintenance
- c. Normal Operations
- d. Start-up
- e. Shutdown
- f. Facility/System/Equipment Testing
- g. Training
- h. Transportation
- i. Emergency Response
- j. Inspection/Monitoring
- k. Facility Decontamination/Decommissioning

20. Immediate Actions Taken and Results: _____

Attachment 3 - Instructions for Completing an Occurrence Report

General

The following instructions apply to the reporting of occurrences via the electronic data base, the Occurrence Reporting and Processing System (ORPS). The numbers on the specific report items correspond with the numbers in the Occurrence Report format. All fields with an asterisk (*) preceding them are required for all (notification, update, and final) reports. Fields marked with a pound sign (#) are required under certain conditions, for example, depending on occurrence type, report type, or the answer to a previous question.

Items 1 through 19 and Item 25 of the Occurrence Report are required for the Notification Report. Data should be entered in the other fields when known. For the Update Report and Final Reports, information on the Notification Report shall be retained and updated as better information becomes available. The DOE FR and Program Manager may provide comments in Items 34 and 35, respectively, for all reports.

Occurrence Report Items

A. Facility/Personnel Information

- (1) *Name of Facility. Waste Isolation Pilot Plant
- (2) *Facility Function. Enter the type of facility or the activity/function performed by the facility. Only one function can be selected. Possible entries are: Nuclear Waste Operations or Balance-of-Plant (e.g., offices, machine shops, site/outside utilities, safeguards/security, and transportation)
- (3) *Name of Laboratory, Site, or Organization. This will automatically fill in by the computer.
- (4) *Facility Manager/Designee. Enter the name, title, and telephone number of the FM/FMD who has direct line responsibility for operation of the facility. Enter the name, title, and telephone number of the responsible FM/FMD who approved this report, by personally transmitting the electronic report. NOTE: ORPS will not automatically enter the name of the FM/FMD in this field.
- (5) *Originator/Transmitter. Enter the name, title, and telephone number of the person who originated this report. This is the person who gathers the information and is most knowledgeable about the event. The name of the transmitter will automatically be entered by the computer when the report is uploaded.
- (6) #Authorized Classifier. Not applicable

Attachment 3 - Instructions for Completing an Occurrence Report

B. Specific Report Items.

- (1) *Occurrence Report Number. The Occurrence Report number will be automatically generated. Examples are: ALO--WWID-WIPP-1995-0005 and ALO--WWID-WIPP-1995-0003.
- (2) *Report Type and Date. Check the block that identifies the type of Occurrence Report being submitted. Use an Update Report for recategorization of an occurrence. Possible entries are Notification Report, Update Report, or Final Report.
 - (a) Items 1 through 19 and Item 25 of the Occurrence Report are required for the Notification Report, which remains a part of subsequent Occurrence Reports.
 - (b) All dates and the time of the Notification Report submission are computer generated. The date that the report is entered into the ORPS data base is the Occurrence Report's submission date.
 - (c) To cancel an Occurrence Report, check the block under Report Type for Final Report as well as the block for canceled under occurrence category (Item 3 below). Canceled reports must be finalized and go through the same approval process as all other Occurrence Reports; however, Items 20 through 35 are not required fields for canceled reports and, once it is signed by the DOE FR and Program Manager, the Occurrence Report will be removed from the active data base.
- (3) *Occurrence Category. Indicate which category has been determined for the occurrence. Only one category can be selected. Possible entries are Emergency, Unusual, Off-Normal, Canceled.
- (4) *Number of Occurrences. Enter the number of occurrences included in this report. The number will always be one unless the occurrences meet the specific criteria for Roll-Up Reports for Off-Normal Occurrences, as discussed in Section 7. If the occurrences meet those criteria, be sure to change this field each time additional occurrences are added.

#Original Occurrence Report. For Roll-Up Reports with an approved Final Report, enter the Occurrence Report number for the original occurrence that is on the ORPS data base as an approved Final Report.
- (5) *Division or Project. Enter: WID/WIPP
- (6) *DOE Secretarial Office. Enter: EM - Environmental Management
- (7) *System, Building, or Equipment. Identify the systems, equipment, or structural items involved in the occurrence, as applicable. In addition, in the case of component failures or defective parts or materials, provide such

Attachment 3 - Instructions for Completing an Occurrence Report

information as the manufacturer, model number, size. The most significant item(s) should be listed here. Additional information can be provided in the Description of Occurrence (Item 16).

- (8) *Unclassified Controlled Nuclear Information. The WIPP has no UCNI. This item will always have a "No" entered.
- (9) #Plant Area. Indicate the name of the site-specific plant area (e.g., F-Area, M-Area) where the occurrence took place.
- (10) *Date and Time Occurrence Was Discovered. Enter the date and time when the facility staff discovered the event or condition being reported.
- (11) *Date and Time Occurrence Was Categorized. Enter the date and time the FM/FMD determined that the event or condition constituted a reportable occurrence and determined its category (Emergency, Unusual, or Off-Normal Occurrence).
- (12) #DOE Notification. Enter the name of the DOE HQ Coordinator and the date and time when the DOE HQ EOC was notified. This field is not required for occurrences that are categorized as off-normal.
- (13) #Other Notifications. Enter the name(s), organization(s), date(s), and notification time(s) of State and local officials or other agencies. Additional information can be provided in the Immediate Actions Taken and Results field (Item 19).
- (14) *Subject or Title of Occurrence. Enter a brief title or description (140 characters or less) of the nature, cause, and result of the occurrence. If the occurrence involved an Unreviewed Safety Question, the acronym "USQ" shall be placed at the end of the Subject or Title of Occurrence. If the report is a Roll-Up Report, include "Roll-Up" in the title.

Attachment 3 - Instructions for Completing an Occurrence Report

- (15) *Nature of Occurrence. Enter the nature(s) of the occurrence. As many as three selections can be made. Possible entries are listed below.

Group 1. Facility Condition

- 01A. Nuclear Criticality Safety
- 01B. Fires/Explosions
- 01C. Safety Status Degradation
- 01D. Loss of Control of Radioactive Material/Spread Contamination
- 01E. Safety Structure/System/Component Degradation
- 01F. Violation/Inadequate Procedures
- 01G. Oversight Activities
- 01H. Operations

Group 2. Environmental

- 02A. Radionuclide Releases
- 02B. Release of Hazardous Substances/Regulated Pollutants/Oil
- 02C. Hazardous Material Contamination
- 02D. Ecological Resources
- 02E. Environmental Agreement/Compliance Activities

Group 3. Personnel Safety

- 03A. Occupational Illness/Injuries
- 03B. Vehicular Incidents
- 03C. Safety Concerns

Group 4. Personnel Radiological Protection

- 04A. Radiation Exposure
- 04B. Personnel Contamination

Group 5. Safeguards and Security

- 05A. Criminal Acts
- 05B. Unaccounted for Classified Matter/Compromised Information
- 05C. Substance Abuse
- 05D. Intelligence Activities
- 05E. Physical Security System Computer
- 05F. Unplanned/Unscheduled Outage of Site Security System
- 05G. Demonstrations/Protests
- 05H. Firearms
- 05I. Other Security Concerns
- 05J. Material Control and Accountability

Attachment 3 - Instructions for Completing an Occurrence Report

Group 6. TransportationGroup 7. Value Basis Reporting

- 07A. Cost Based Occurrences
- 07B. Defective Item, Material, or Service

Group 8. Facility Status

- 08A. Facility/Process/Activity Unscheduled Shutdown
- 08B. Existing Facility/Process/Activity Shutdown Extension
- 08C. New Facility/Process/Activity Start-up Delay

Group 9. Nuclear Explosive SafetyGroup 10. Cross-Category Items

- 10A. Collectively Significant Related Occurrences
- 10B. Near Miss Occurrences
- 10C. Potential Concerns/Issues

- (16) *Description of Occurrence. Enter a clear, concise, objective description of what happened and what was observed. To the maximum extent possible, a sequence of events should be provided. The type of information to be provided in the description includes all of, but is not limited to, the following:

- a. The method of discovery.
- b. Any component failures and the failure modes.
- c. Any personnel errors involved, including the type and result of the error.
- d. Any procedure problem encountered.
- e. The response of any automatic or manual safety systems and the signals which initiated and terminated their operation.
- f. The duration of any failures.
- g. Operator actions that affected the course of events.
- h. The loss of any safety equipment.
- i. For contamination events (Group 1D or Group 4B of Attachment 1), the information described in Attachment 4.

When appropriate for clarification, photos, sketches, or drawings should be attached. Other documents such as investigation reports, Notices of Violation (NOVs), environmental enforcement action, and formal root cause analysis reports should also be attached. All photos, sketches, or drawings should be referenced as attachments to the Occurrence Report, with specifics as to where or from whom they can be obtained.

Attachment 3 - Instructions for Completing an Occurrence Report

To the extent possible, avoid the use of plant-specific terms and acronyms. When used, such terms should be clearly defined.

- (17) *Operating Conditions of Facility at Time of Occurrence. Describe the operational status of the facility or equipment at the time of the occurrence including, for example, pertinent temperatures, pressures, or other parameters necessary for evaluation of the occurrence and its consequences. If said information is not applicable, enter "Does not apply."
- (18) *Activity Category. Enter the that best describes the ongoing activity at the time of the occurrence.
- (19) *Immediate Actions Taken and Results. Describe the immediate or remedial actions taken to return the facility, system, or equipment item to service; to correct or alleviate the anomalous condition; and to record the results of those actions. These may include temporary measures to keep the facility in a safe standby condition or to permit continued operation of the facility without compromising safety until a more thorough investigation or permanent solution can be effected. For contamination events, include the information described in Attachment 4.
- (20)-(22) #Cause. This must be thoroughly addressed as the information becomes available. Enter the cause(s) that best describes the apparent root, direct and contributing cause(s), if applicable. Only one direct and root cause may be entered, but up to three contributing causes may be entered. In the final evaluation of a reportable occurrence, there must be complete consideration of the cause, including contributory factors, with analysis to show what cause was root to the occurrence and what causes were only contributory. In conducting evaluations of the occurrence to determine the root cause, the critiques and analyses described in DOE-NE-STD-1004-92 should be used. The possible entries are the same for all three cause fields. The direct, contributing, and root causes of reportable occurrences are classified into eight broad categories and various subcategories. The eight categories of causes and their associated subcategories are as follows:
 - 1. Equipment/Material Problem. An event or condition resulting from the failure, malfunction, or deterioration of equipment or parts, including instruments or material.
 - 1A. Defective or Failed Part. A part/instrument that lacks something essential to perform its intended function.
 - 1B. Defective or Failed Material. A material defect or failure.

Attachment 3 - Instructions for Completing an Occurrence Report

- 1C. Defective Weld, Braze, or Soldered Joint. A specific weld/joint defect or failure.
- 1D. Error by Manufacturer in Shipping or Marking. An error by the manufacturer or supplier in the shipping or marking of equipment.
- 1E. Electrical or Instrument Noise. An unwanted signal or disturbance that interferes with the operation of equipment.
- 1F. Contaminant. Failure or degradation due to radiation damage or foreign material such as dirt, crud, or impurities.
- 1G. End of Life Failure. A failure where the equipment or material is run to failure and has reached its end of design life.
- 2. Procedure Problem. An event or condition that can be traced to the lack of a procedure, an error in a procedure, or a procedural deficiency or inadequacy.
 - 2A. Defective or Inadequate Procedure. A procedure that either contains an error or lacks something essential to the successful performance of the activity.
 - 2B. Lack of Procedure. No written procedure was in place to perform the activity.
- 3. Personnel Error. An event or condition due to an error, mistake, or oversight.
 - 3A. Inattention to Detail. Inadequate attention to the specific details of the task.
 - 3B. Procedure Not Used or Used Incorrectly. The failure to use or the inappropriate use of written instructions, procedures, or other documentation.
 - 3C. Communication Problem. Inadequate presentation or exchange of information.
 - 3D. Other Human Error. Human error other than those described above.

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4. Design Problem. An event or condition that can be traced to a defect in design or other factors related to configuration, engineering, layout, tolerances, calculations, etc.
 - 4A. Inadequate Work Environment. Inadequate design of equipment used to communicate information from the facility to a person (e.g., displays, labels, etc.) as well as inadequate work environment, such as inadequate lighting, working space, or other human factor considerations.
 - 4B. Inadequate or Defective Design. A design in which something essential was lacking (defective) or when a detail was included but was not adequate for the requirement (inadequate).
 - 4C. Error in Equipment or Material Selection. A mistake in the equipment or material selection only, not to include a procurement error (see Personnel Error - (e) Other Human Error) or a specification error (see Design Problem - (d) Drawing, Specification, or Data Errors).
 - 4D. Drawing, Specification, or Data Errors. An error in the calculation, information, or specification of a design.
5. Training Deficiency. An event or condition that can be traced to a lack of training or insufficient training to enable a person to perform a desired task adequately.
 - 5A. No Training Provided. A lack of appropriate training.
 - 5B. Insufficient Practice or Hands-On Experience. An inadequate amount of preparation before performing the activity.
 - 5C. Inadequate Content. The knowledge and skills required to perform the task or job were not identified.
 - 5D. Insufficient Refresher Training. The frequency of refresher training was not sufficient to maintain the required knowledge and skills.
 - 5E. Inadequate Presentation or Materials. The training presentation or materials were insufficient to provide adequate instruction.
6. Management Problem. An event or condition that can be directly traced to managerial actions or methods.
 - 6A. Inadequate Administrative Control. A deficiency in the controls in place to administer and direct activities.

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- 6B. Work Organization/Planning Deficiency. A deficiency in the planning, scoping, assignment, or scheduling of work.
 - 6C. Inadequate Supervision. Inadequate techniques used to direct workers in the accomplishment of tasks.
 - 6D. Improper Resource Allocation. Improper personnel or material allocation resulting in the inability to successfully perform assigned tasks.
 - 6E. Policy Not Adequately Defined, Disseminated, or Enforced. Inadequate description, distribution, or enforcement of policies and expectations.
 - 6F. Other Management Problem. A management problem other than those defined above.
7. External Phenomena. An event or condition caused by factors that are not under the control of the reporting organization or the suppliers of the failed equipment or service.
- 7A. Weather or Ambient Condition. Unusual weather or ambient conditions, including hurricanes, tornadoes, flooding, earthquake, and lightning.
 - 7B. Power Failure or Transient. Special cases of power loss that are attributable to outside supplied power.
 - 7C. External Fire or Explosion. An external fire, explosion, or implosion.
 - 7D. Theft, Tampering, Sabotage, or Vandalism. Theft, tampering, sabotage, or vandalism that could not have been prevented by the reporting organization.
8. Radiological/Hazardous Material Problem. An event related to radiological or hazardous material contamination that cannot be attributed to any of the other causes.
- 8A. Legacy Contamination. Radiological or hazardous material contamination attributed to past practices.
 - 8B. Source Unknown. Radiological or hazardous material contamination where the source cannot be reasonably determined.

Attachment 3 - Instructions for Completing an Occurrence Report

Specific information pertaining to each cause field; (20), (21), and (22), is as follows.

- (20) #Direct Cause. The cause that directly resulted in the occurrence. Enter only one direct cause for the occurrence. One subcategory for the direct cause selected must also be checked. The direct cause is not required for Update Reports; however, it is required for Final Reports.

For example, in the case of a leak, the direct cause could have been the failure in the component or equipment that leaked. In the case of a system misalignment, the direct cause could have been operator error in the alignment.

- (21) Contributing Causes. The cause(s) that contributed to the occurrence but, that by itself, would not have caused the occurrence. Enter as many as three contributing causes for the occurrence. One subcategory for each of the contributing causes must also be checked. This is not a required field.

For example, in the case of a leak, the contributing cause could be lack of adequate operator training in leak detection and response resulting in a more severe event than would have otherwise occurred. In the case of a system misalignment, the contributing cause could be excessive distractions to the operators during shift, resulting in less than adequate attention to important details during system alignment.

- (22) #Root Cause. The cause that, if corrected, would prevent recurrence of this and similar occurrences. The root cause does not apply to this occurrence only, but has generic implications to a broad group of possible occurrences, and it is the most fundamental aspect of the cause that can logically be identified and corrected. There may be a series of causes that can be identified, one leading to another. This series should be pursued until the most fundamental, correctable cause has been identified. Check only one root cause for the occurrence. One subcategory for the root cause selected must also be checked. The root cause is not required for Update Reports; it is, however, required for Final Reports.

For example, in the case of a leak, the root cause could be a failure of management to ensure that maintenance is effectively managed and controlled. This cause could have led to the use of improper seal material or missed preventive maintenance on a component, which ultimately led to the failure. In the case of a system misalignment, the root cause could be failure in the training program, leading to a situation in which operators are not fully familiar with control room procedures and are willing to accept excessive distractions.

Attachment 3 - Instructions for Completing an Occurrence Report

- (23) #Description of Cause. Discuss the cause of the occurrence to include root, direct, and contributing causes, if applicable, and the corrective actions identified. Do not repeat a description of the occurrence but discuss the results of the causal analysis. The root cause analysis methodology used shall be identified. A detailed description of the corrective actions is required to demonstrate that the identified actions will adequately address the cause(s) of the problem.

For example, if a procedural deficiency was identified, it would not be sufficient to state simply that the procedure was revised. An explanation is required regarding why the deficiency was not identified during the review and approval process (to the extent possible); how the procedure was subsequently revised; and how the revision, in conjunction with any other corrective actions, addresses the cause of the problem.

When appropriate, separate documentation for the root cause analysis may be attached. If ORPS is being used, the separate documentation should be referenced as attachments to the Occurrence Report, with specifics as to where or from whom they can be obtained.

Reports documenting suspect or counterfeit parts (Group 7B) shall include the test "suspect/counterfeit parts" in this section to facilitate searches.

This field is not required for Update Reports; it is, however, required for Final Reports.

- (24) #Evaluation by Facility Manager. With the information available, the FM/FMD should provide an evaluation of the occurrence and its effect or possible effect on the plant, system, program, etc. in the Update Report. The FM/FMD may later supplement this evaluation with additional entries in Update Reports or in the Final Report. This field is required on a Notification Report if the responses to Item 25, Is Further Evaluation Required, are "Yes," further evaluation is required, and "Yes," the evaluation is required before further operation.
- (25) *Is Further Evaluation Required? Check "Yes" or "No." This is a required field on all reports. This response should not be "Yes" in a Final Report since further evaluation could change the root cause or identify additional corrective actions.

If further evaluation is required, then "Yes" or "No" must be checked as to whether that evaluation is required before further operation.

If further evaluation is required before further operation (i.e., both "Yes" blocks checked), then who will take the action (a person's title or a specific

Attachment 3 - Instructions for Completing an Occurrence Report

organizational unit) and a date when the action will be taken must be provided. Field # 24 should be completed if "Yes" is checked in both blocks.

- (26) #Corrective Actions. List all actions identified to correct the problem that, when completed, will prevent recurrence. The first two lines of each corrective action should be a title or summary of the corrective action. In addition, provide actual or target completion dates for all of the corrective actions listed.

For similar occurrences previously documented in an approved Final Report (as discussed in Section 6.0), the corrective action narrative should state, "The corrective actions are the same as those stated in the original approved Final Report" and provide the original approved Final Report number; the corrective action target date should be the latest target date on the original approved Final Report; and the corrective action completion date should be the final actual completion date for all of the corrective actions (i.e., the field will remain empty until completion of all of the corrective actions).

This field is not required for Update Reports; however, it is required for Final Reports.

- (27) #Impact on Environment, Safety, and Health. Provide an assessment of the environment, safety, and health consequences and implications of the occurrence. Describe the impact of the occurrence on the environment, safety, and health of workers, the public, and onsite/offsite environs. This should include amounts and types of hazardous or radioactive materials released, levels and types of contamination, exposure levels of workers and the public, and known or projected environmental, safety, and health impacts. This assessment may be based on existing conditions. The evaluation must be carried out to the extent necessary to fully assess the safety consequences and safety margins associated with the occurrence.

For an occurrence related to nuclear safety, an assessment of the occurrence under alternative conditions must also be included if the occurrence could have been more severe (e.g., the facility would have been in a condition not analyzed in the Safety Analysis Report) under reasonable and credible alternative conditions such as power level or operating mode. For example, if the occurrence happened while the facility was at 15 percent power and the same occurrence could have taken place while the facility was at 100 percent power, and, as a result, the environment, safety, or health consequences would have been considerably more serious, the assessment must describe those conditions and consequences.

Attachment 3 - Instructions for Completing an Occurrence Report

For contamination events, include the information described in Attachment 4

This field is not required for Update Reports; it is, however, required for Final Reports.

- (28) #Programmatic Impact. Describe the impact of the occurrence on the program or project affected. This could be a loss of data, loss of plant availability for a specified period, additional costs, schedule delays, or other measurable consequences of the occurrence.

This field is not required for Update Reports; it is, however, required for Final Reports.

- (29) #Impact Upon Codes and Standards. If the occurrence affects the requirements of national codes and standards, program standards, or DOE Orders, a statement regarding the adequacy of the codes or standards should be provided, along with any recommended changes.

This field is not required for Update Reports; it is, however, required for Final Reports.

- (30) #Lessons Learned. Include any lessons learned from the occurrence that could be of importance to other facility operators or that should be addressed in personnel training or facility procedures.

This field not required for Update Reports; it is, however, required for Final Reports.

- (31) #Similar Occurrence Report Numbers. Indicate by their report numbers any similar occurrence(s) of which you are aware for this or other facilities. Also, identify any known commercial reactor Licensee Event Reports or other related documents that describe similar occurrences. The purpose of this item is to identify, if recognized, occurrences that might suggest a generic problem that may result in single or common lessons learned.

This field not required for Update Reports; it is, however, required for Final Reports.

- (32) User-defined Field #1. This optional field can be used by the FM/FMD to store facility-specific information (e.g., a cross-reference to performance indicator data).

Attachment 3 - Instructions for Completing an Occurrence Report

- (33) User-defined Field #2. This optional field can be used by the FM/FMD to store additional facility-specific information (e.g., a cross-reference to a site-specific number or name).
- (34) #DOE Facility Representative Input. The DOE FR or designee should provide his or her evaluation of the occurrence, including an evaluation of the initial and proposed corrective actions and any follow-up by the contractor, and should describe any other actions that DOE has taken since the occurrence. The FR may supplement such information with subsequent additional entries, as appropriate. After completing the input, enter the FR's name and the date. If ORPS is being used, the FR's name and the date will be automatically entered by the computer. If a Final Report is being rejected, the DOE FR shall use this space to indicate why.

This field is required only on Final Reports rejected by the FR.

- (35) #Program Manager Input. The Program Manager or designee should provide his or her evaluation of the occurrence, including an evaluation of the initial and proposed corrective actions and any follow-up, and should describe any other actions that DOE has taken since the occurrence. The Program Manager may include additional entries as appropriate. After completing the input, enter the Program Manager's name and the date. The Program Manager's name and the date will be automatically entered by the computer. If a Final Report is being rejected, the Program Manager shall use this space to indicate why. If the approval authority for Off-Normal reports has been delegated to the FR, then the Program Manager will only be able to provide comments on the Off-Normal Final Report prior to approval of the report by the FR.

This field is required only on Final Reports rejected by the Program Manager.

- (36) #Signatures. The FM/FMD name, as described and entered in Section A 4, will automatically be entered with an indication of acceptance. The Final Report will then be available for the FR and Program Manager, or their designees, to review and accept. Once all three individuals have accepted the report, it will automatically be available to all DOE Elements for their use in analysis and trending. This field is required for Final Reports only.

Attachment 4 - Reporting Radiological Occurrences

Reporting Radiological Contamination Occurrences

The information listed below provides guidance for completing an Occurrence Report that has been categorized under Group 1D or Group 4B of Attachment 1.

The information provided for Items 16, 19, and 27 (Attachment 3), should be completed or reviewed by the Radiological Control Manager.

Personnel Contamination Occurrences

Description of
Contamination
Occurrence - Item 16 of
Attachment 3

Type of information	Suggested statements
1. Number and types of individuals	a. Contamination event involves single individual. b. Contamination event involves ____ individuals. c. Type of individual: radiation worker, general employee, member of the public, minor, visiting scientist or researcher, visiting DOE or other Federal employee.
2. Type of contamination event	a. Only personal clothing of worker contaminated. b. Skin contamination involved. c. Potential internal contamination from inhalation/ingestion, further assessment being performed. d. Facial/nasal contamination, possible internal contamination. e. Internal contamination confirmed by bioassay. f. Radionuclide(s) involved if known. State general category (i.e., beta and/or gamma, alpha, etc.) if unknown.
3. Extent of contamination	a. Appropriate description of clothing (e.g., pants, shoes, shirt, etc.). b. Confined to limited area of body (e.g., tip of right index finger, hot particle on left shoulder, palm of right hand, etc.). c. If not confined, state area of body involved. d. Maximum detected activity: ____ dpm/100 c ² .
4. Location (area) where contamination	a. Occurred inside of radiological area (e.g., Contamination Area, High Contamination Area, Airborne Radioactivity Area).

Attachment 4 - Reporting Radiological Occurrences

- | | |
|--|--|
| occurred & worker activity | b. Occurred outside of radiological area, but onsite or within the facility.
c. State worker activity being performed at time of occurrence. |
| 5. Significance of occurrence relative to operations | a. Isolated event confined to room/facility/ building/area.
b. Event resulting from equipment or protective clothing malfunction.
c. Event resulting from procedural violation or deficiency.
d. Recurrent event. |

Immediate Action in
Response to
Contamination
Occurrence - Item 19 of
Attachment 3

- | Type of information | Suggested statements |
|------------------------------|---|
| 1. Status of decontamination | a. Personal clothing retained.
b. Individual(s) successfully decontaminated below detectable levels.
c. Individual(s) decontaminated below reporting criteria; however, residual contamination persists.
d. Medical assistance required. |

Impact on Worker Health
Due to Contamination
Occurrence - Item 27 of
Attachment 3

- | Type of information | Suggested statements |
|--------------------------------|---|
| 1. Relative health consequence | a. Less than/Approaching ____% of the annual deep or shallow DOE skin, lens of the eye, extremity, and/or committed effective dose limit (for any internal intake), as applicable. (Do not provide comparison to site or facility administrative control level). No health consequence to individual(s).
b. Greater than applicable DOE limit, potential health consequence being evaluated. Evaluation to be initiated pursuant to DOE Order 225.1. |

Attachment 4 - Reporting Radiological Occurrences

- c. Concurrent injury requiring medical assistance onsite/offsite. State option a or b, as applicable, and nature of injury.
- d. No concurrent injury. State option a or b, as applicable. Indicate whether decontamination required onsite/offsite medical assistance.

Area or Facility Contamination Occurrences

Description of
Contamination
Occurrence - Item 16 of
Attachment 3

Type of information	Suggested statements
1. Location of occurrence	<ul style="list-style-type: none"> a. Room. b. Building. c. Facility. d. Area. e. Site.
2. Type of contamination	<ul style="list-style-type: none"> a. Spill or loss of containment. b. Airborne release. c. Fixed/loose surface contamination. d. Radionuclide(s) involved if known. State general category (i.e., beta and/or gamma, alpha, etc.) if unknown.
3. Extent of contamination	<ul style="list-style-type: none"> a. Total area involved is ____ft². b. Confined within room/building/facility/area/site. c. Release beyond or containment within above locations, as applicable.
4. Impact on operations	<ul style="list-style-type: none"> a. Normal operation not impacted. b. Designated equipment removed from service. c. Personnel access restricted until cleanup is completed.

Immediate Action in
Response to
Contamination
Occurrence - Item 19 of
Attachment 3

Type of information	Suggested statements
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Attachment 4 - Reporting Radiological Occurrences

- | | |
|--|---|
| 1. Status of control & decontamination | a. Affected area controlled and/or isolated to prevent spread of contamination.
b. Decontamination initiated or completed. |
|--|---|

Impact on Worker Health
Due to Contamination
Occurrence - Item 27 of
Attachment 3

- | Type of information | Suggested statements |
|---|--|
| 1. Status of control | a. No contamination of individual(s) onsite.
b. No potential for further spread of contamination.
c. Affected area decontaminated. |
| 2. Significance relative to applicable limits | a. Maximum contamination levels ____ dpm/100 c ² and units of curie per 100 c ² .
b. Comparison with RadCon Manual Table 2-2 limits. Evaluation to be initiated pursuant to DOE Order 225.1 dependent upon level by which Table 2-2 is exceeded.
c. General area dose rate as measured at 1 meter above contaminated surface.
d. If worker involved, relate dose rate to actual dose received based on occupancy time spent in the contaminated area.
e. No health consequence to worker if less than applicable dose limit. If worker contaminated, implement responses for personnel contamination provided above. |

Attachment 5 - Roll-Up Report Instructions

A Roll-Up Report may remain open for a period not to exceed 90 calendar days from categorization of the first occurrence reported therein or when the number of occurrences reported equals 30. Once either of those limits is reached, a Final Report must be submitted.

If after initial roll-up of an occurrence, the causes and corrective actions of that occurrence are found to be different than originally thought, then that specific occurrence will be deleted from the Roll-Up Report through the submittal of an Update Report followed by the submittal of a new Occurrence Report.

Field #4, "Number of Occurrences," should be continually updated as new occurrences are identified and should reflect the total number of occurrences reported. The first occurrence in a Roll-Up Report will be identified as "1."

Field #16, "Description of the Occurrence," and Field #19, "Immediate Actions Taken and Results," should clearly identify each new occurrence with a heading such as "Occurrence No. 1, 2, 3,..." and include a discussion of each additional occurrence. Field #16 should also include the appropriate information described in Fields #7, 10, 11, 13, 17, and 18 for each subsequent occurrence.

Roll-Up Report Format for Similar Occurrences Documented in Non-Finalized Occurrence Report.

- (1) Field #14, "Subject/Title of the Occurrence," should contain the word "Roll-Up" enclosed in parentheses at the end of the title.
- (2) Field #20 and #21 should reflect the direct and/or contributing cause(s).
- (3) Field #22 should identify the single root cause code of the occurrences, such as "Design Problem - Inadequate or Defective Design" for radiation monitors in need of design improvements.
- (4) Field #26 should contain corrective actions required to correct all of the identified causes, i.e., direct, contributing and root, of all of the occurrences.

Roll-Up Report Format for Similar Occurrences Previously Documented in an Approved Final Report.

- (1) Field #4 should also indicate the Occurrence Report number of the original approved Final Report.
- (2) Field #14, "Subject/Title of the Occurrence," should be the same as the original approved Final Report with the word "roll-up" enclosed in parentheses at the end of the title.

Attachment 5 - Roll-Up Report Instructions

- (3) Field #20 - #22 should contain the same root cause, direct, and contributing causes as the approved Final Report.
- (4) Field #26 should contain the corrective actions and schedule identified in the approved Final Report.

Attachment 6 - Responsibilities

FM/FMD

The FM/FMD shall be available at all times via telephone or personal pager. The FM/FMD is responsible for the following:

- Categorizing the occurrence.
- Preparing the Notification Report, Update Report, Roll-Up Occurrence Report, and Final Report.
- Utilizing the ORPS data base to document and distribute WIPP Occurrence Reports.
- Making appropriate notification to DOE-HQ EOC, DOE-AL EOC, and Carlsbad Area Office (CAO) FR.
- Notifying the appropriate Waste Isolation Division (WID) management personnel and the ORC of the occurrence, as soon as practical, but not later than the next working day.
- Appointing a RCATL to investigate the occurrence per the requirements of WP 15-MD3102, Event Investigation and Root Cause Analysis. This includes establishing the root cause, direct cause; developing and scheduling corrective actions; and identifying and explaining lessons learned.
- Ensuring the ORC reviews the ORPS data base regularly to identify good practices and lessons learned from other facilities that can be used at the WIPP.
- Adopting a trending and analysis system that permits the early determination of deteriorating facility condition so that corrective actions can be taken to rectify the situation and prevent future occurrences.
- Ensuring that the ORPS data base is kept up to date.
- Ensuring the ORPS data base is monitored at frequent intervals for accepted and rejected ORs and that the appropriate actions are initiated to revise the rejected ORs.
- Informing the ORC of changes in the personnel assigned as FMD.

Attachment 6 - Responsibilities

- Coordinating with the DOE FR and approving the Notification Report, Update Report, Roll Up Occurrence Report and Final Report prior to uploading the report into the ORPS data base.
- Providing the Manager of Emergency Management (MEM) with the FMD on-call schedule. Informing the MEM of any changes to the published schedule.
- Preparing the investigative report per the requirements of WP 15-MD3102.

Environment, Safety and Health (ES&H) Manager

The ES&H Manager or designee is responsible for reviewing the Notification Report, Update Report, Roll-Up Occurrence Report, and Final Report prior to uploading the report into the ORPS data base.

Facility Shift Manager (FSM)

The FSM is responsible for reporting occurrences to the FM/FMD and assisting the FM/FMD in the initial investigation. The FSM should take the necessary actions to preserve conditions for continued investigation; however, these actions are not to interfere with establishing a safe condition.

Responsible Manager (RM)

The RM is responsible for the following:

- Assisting in the occurrence reporting process as directed by the FM/FMD
- Implementing corrective actions as directed by the FM/FMD
- Ensuring corrective actions with past due completion dates have written justification from the cognizant department head before a new target date will be accepted and entered into the ORPS data base. This justification is to be sent to the ORC.

Root Cause Analysis Team (RCAT)

The RCAT, under the direction of the RCATL, shall have the authority to independently review and analyze any event to which it is assigned. The RCAT is responsible for the following:

- Analyze reportable occurrences and establish the root cause, direct cause, contributing cause(s), issue a formal written report per the guidelines of WP 15-MD3102.

Attachment 6 - Responsibilities

- Provide recommended corrective actions.

Occurrence Reporting Coordinator (ORC)

The ORC is responsible for assisting and providing support to the FM/FMD in the occurrence reporting process. The ORC is responsible for the following:

- Tracking incomplete corrective action status and updating the ORPS data base as needed from the information provided by the FM/FMD.
- Assisting the FM/FMD in the preparation of the Notification Report, Update Report, Roll-Up Occurrence Report, and Final Report to ensure the reports are completed on schedule and uploaded to the ORPS data base
- Monitoring the ORPS data base at frequent intervals for accepted and rejected ORs and advising the FM/FMD to initiate the appropriate actions to revise the rejected ORs.
- Following the FM/FMD's guidance, use the DOE Operational Data Base to evaluate other facility reports for operational data and lessons learned that may apply to the WIPP.
- Distributing Final WIPP ORs to WIPP Department Managers after the DOE HQ PM has approved the report.
- Maintaining this procedure and records pertaining to the occurrence reporting process.
- Providing the WIPP Department Managers and FM/FMD a report listing the status of all ORs and corrective actions that have not been submitted as final.
- Providing the CAO and the WIPP Document Services Section a copy of all final ORs. These reports will be reviewed and all protected information based on the Freedom of Information Act will be removed. Reports will be sent to the WIPP New Mexico Public Reading Rooms and DOE Headquarters reading room within two weeks after receiving final approval by the DOE Program Manager.
- Assisting the FM/FMD in categorization of events.
- Notifying the WIPP Training Section when changes are made to the procedure that will affect course content.

Attachment 6 - Responsibilities

- Maintaining the site centralized tracking system with the current status of corrective actions generated from ORs.
- Distributing Final WIPP ORs and Final OR Summary Reports from other DOE facilities to the WIPP Lessons Learned Working Group.
- Maintain the ORPS data base up-to-date on the status of the Final Report's corrective actions. Status of corrective actions shall be available at any time from the ORPS data base.
- Provide the FM/RM with a monthly status (update) of all incomplete ORs and corrective actions by the 15th calendar day of the month.
- Provide the WIPP Department Managers and FM with the root causes of the Final Occurrences Report(s) that occurred during the previous calendar year. This report will identify negative trends for the RM's appropriate action. The report will be provided by February 15.

Employee

The employee is responsible for the following:

Notifying the CMR of the occurrence/event/discrepancy and immediately responding, without endangering himself or others, to stabilize and mitigate the consequences of the event. The employee will then notify line management of the event.

Training Section

The Training Section is responsible for providing training to all employees and conducting the necessary training (i.e., procedure revisions, changes to DOE Order, etc.). The training shall include the following:

- The purpose of DOE Order 232.1A and its implementation for FM/FMD
- Each employee's duty to report the occurrence

Attachment 6 - Responsibilities

The WIPP Training Section will provide the FM/FMD and FSM with initial and necessary periodic refresher training (i.e., procedure revisions/changes to DOE Order, etc.) regarding the requirements set forth in DOE Order 232.1A and this procedure. This training will include the following:

- Indoctrination in the philosophy of occurrence reporting
- Identification of ROs; their categorization, notification, and associated reporting requirements; root cause analysis to determine root causes and generic implications

Document Services Section

The Document Services section is responsible for the following:

- Forwarding a copy of the Final Occurrence Reports to the New Mexico Public Reading Rooms and DOE reading room.
- Responding to Freedom of Information requests concerning ORs.

Central Monitoring Room (CMR) Operator

The CMR Operator is responsible for the following:

- Alerting the FSM to the occurrence/event as reported to him/her
- Initiating those immediate actions specified and or directed by the FSM in the stabilization or restoration of the facility operation to a safe condition.
- Recording all pertinent information to include details concerning the discovery of the occurrence and actions to stabilize or place the facility/operation to a safe condition.

Attachment 7 - Definitions

Cause (Causal Factor) - A condition or an event that results in an effect (anything that shapes or influences the outcome).

Central Monitoring Room (CMR) Operator - The on-shift operator responsible for CMR operations.

Condition - Any as-found state, whether or not resulting from an event, which may have adverse safety, health, quality assurance, security, operational or environmental implications. A condition is usually programmatic in nature. For example, an error in analysis or calculation; an anomaly associated with design or performance; or an item indicating a weakness in the management process are all conditions.

Defective Item or Service - Any item, material, or service which does not meet the commercial standard or procurement requirements as defined in catalogues, proposals, procurement specifications, design specification, testing requirements, contracts, or the like. It includes those items or services found during acceptance testing, preoperational testing, operations, inspections, or audit, not to meet the quality or reliability requirements appropriate to the use of specificity of the item or service procured. It also includes misrepresentation of the specifications or trademarks associated with the parts / service marking, packaging, or certification / identification stamps. It does not include parts or services which fail or are otherwise found to be inadequate because of random failures or errors within the accepted reliability level.

DOE Activity - An activity taken for or by DOE that has the potential to result in the occupational exposure of an individual to radiation or radioactive material and hazardous substances or materials. The activity may be, but is not limited to, design, construction, operation, or decommissioning. To the extent appropriate, the activity may involve a single DOE facility or operation, or a combination of facilities and operations, possibly including an entire site.

DOE Facility Representative (FR) - For each major facility or group of lesser facilities, an individual or designee assigned responsibility by the Head of Field Element/Operations Organization for monitoring the performance of the facility and its operations. This individual should be the primary point of contact with the contractor and will be responsible to the appropriate Secretarial Officer and Head of Field Element/Operations Organization for implementing the requirements of DOE Order 232.1A.

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Emergency - Emergencies are defined in DOE Order 151.1 series of Orders.. Emergency Occurrences are the most serious occurrences and require an increased alert status for on-site personnel and, in specified cases, for off-site authorities. The detailed initial notification requirements, definitions, criteria, and classifications of emergencies and appropriate emergency responses to be taken are provided in WP 12-ER 3904, Categorization and Classification of Operational Emergencies. Written Occurrence Reports shall be completed in accordance with this procedure.

Event - Something significant and real-time that happens (e.g., pipe break, valve failure, loss of power, environmental spill, earthquake, tornado, flood).

Facility - Structures, equipment, and processes that are required for the handling and storage of radioactive waste material.

Facility Manager (FM) - That individual or designee who has direct line responsibility for operation of the facility, including authority to direct physical changes to the facility. The position of FM at the WIPP has been assigned to the Operations Manager (Operations Deputy Manager in his/her absence). The FMD is a person within the Facility Operations section who has been delegated the responsibility to carry out requirements of this procedure by the FM but does not have the authority to direct physical changes to the facility.

Facility Shift Manager (FSM) - The facility manager responsible for directing the facility operations at the WIPP during routine and emergency activities until relieved by higher authorities (Crisis Manager).

Federally Permitted Release - Any release that satisfies the definition of "federally permitted release" in 40 CFR 302.3.

Hazardous Substance or Material -

- a. Department of Energy Office of Safeguards and Security Hazardous Material. Any solid, liquid, or gaseous material that is chemical toxic, flammable, radioactive, or unstable upon prolonged storage, and that exists in quantities that could pose a threat to life, property, or the environment.
- b. Department of Transportation Hazardous Materials (see 49 CFR 171.8 and 172.101). A substance or material, including a hazardous substance, which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce and which has been so designated.

Attachment 7 - Definitions

- c. Environmental Protection Agency (EPA) Hazardous Substances (see 40 CFR 302 and 40 CFR 117). For purposes of transportation, see 49 CFR 171.8 and 172.101.
- d. Environmental Protection Agency Hazardous Wastes (see 40 CFR 261 and 40 CFR 262). Any material that is subject to the Hazardous Waste Manifest Requirements of EPA. For purposes of transportation, see 49 CFR 171.8.
- e. Occupational Safety and Health Administration (OSHA) Hazardous Chemical (see 29 CFR 1910.1000 and 29 CFR 1910.1200). Any chemical which is a physical or a health hazard.
- f. Superfund Amendments and Reauthorization Act for Extremely Hazardous Substances (see 40 CFR 355). These are not defined but appear on a list in Appendix A and B of 40 CFR 355.

- Item -
- a. An all-inclusive term used in place of the following: appurtenance, sample, assembly, component, equipment, material, module, part, structure, subassembly, subsystem, system, unit, or support systems, documented concepts, or data.
 - b. When used in reference to nuclear material, a visible, single piece or container of nuclear material with a unique identification and known nuclear material mass.

Lessons Learned - A "good work practice" or innovative approach that is identified and shared, or an adverse work practice or experience that is shared to avoid recurrence.

Lost Workdays - The number of days (consecutive or not) after, but not including, the day of injury or illness during which the employee would have worked but could not do so; that is, could not perform all or any part of their normal assignment during all or any part of the workday or shift because of the occupational injury or illness.

Member of the Public - Persons who are not occupationally associated with the DOE facility or operations, i.e., persons whose assigned occupational duties do not require them to enter the DOE site.

Non-reactor Nuclear Facility - Those activities or operations that involve radioactive and/or fissionable materials in such form and quantity that a significant nuclear hazard potentially exists to the employees or the general public. Included are activities or operations that: (1) produce, process, or store radioactive liquid or solid waste, fissionable materials, or tritium; (2) conduct separations operations; (3) conduct irradiated materials inspection, fuel fabrication, decontamination, or recovery operations; (4) conduct fuel enrichment operations; or (5) perform environmental remediation or waste management activities involving radioactive materials. Incidental

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use and generating of radioactive materials in a facility operation (e.g., check and calibration sources, use of radioactive sources in research and experimental and analytical laboratory activities, electron microscopes, and X-ray machines) would not ordinarily require the facility to be included in this definition. Accelerators and reactors and their operations are not included. The application of any rule to a non-reactor nuclear facility should be applied using a graded approach.

Nuclear Facility - Reactor and non-reactor nuclear facilities.

Notification Report - The initial documented report, to the Department, of an event or condition that meets the reporting criteria defined in the Occurrence Reporting Requirements Documents. The Notification Report should consist of fields 1 through 19 and 25 of the Occurrence Report.

Occurrence - An event or a condition that adversely affects, or may adversely affect, DOE or contractor personnel, the public, property, the environment, or the DOE mission. Events or conditions meeting the criteria threshold identified in Attachment 1 of this procedure are occurrences.

Occurrence Report (OR) - A documented evaluation of an event or condition that is prepared in sufficient detail to enable the reader to assess its significance, consequence, or implications and to evaluate the actions being proposed or employed to correct the condition or to avoid recurrence.

Occurrence Reporting Coordinator (ORC) - The individual responsible for assisting and providing support to the FM/FMD in the occurrence reporting process.

Occurrence Reporting and Processing System (ORPS) - The unclassified central computerized DOE operational data base containing ORs entered by the FM/FMD.

Oil - Oil of any kind or in any form, including but not limited to petroleum, fuel oil, sludge, oil refuse and oil mixed with wastes other than dredged spoil.

Oral Notification Report - Information contained in Attachment 2 used to report information to the DOE Headquarters Emergency Operation Center.

Performance Degradation - Degradation of a facility, process, or system that reduces the reliability of critical components of the facility whose loss or degradation prevents the system from performing its intended function. Performance degradation does not include the temporary loss of a component where redundant components are maintained in operation and the minimum authorization bases are not compromised.

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Primary Environmental Monitors - Monitoring equipment required to legally monitor ongoing discharges. In general, this term applies to monitors used closest to the point of discharge to determine if discharges are within specified limits. It also includes any equipment that actuates automatically in response to set level signals from such a monitor. It does not include equipment in general area, remediation, or compliance monitoring programs.

Program Manager - The Headquarters individual or designee, designated by and under the direction of a Secretarial Officer, who is directly involved in the operation of facilities under his or her cognizance, and holds signature authority to provide technical direction through Heads of Field Element/Operations Office Organizations to contractors for these facilities.

Release - Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or otherwise disposing of substances into the environment. This includes abandoning/discarding any type of receptacle containing substances in an unenclosed containment structure but does not include permitted containment structures.

Reportable Quantity - For any Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) hazardous substance and radionuclide, the quantity established in 40 CFR Part 302, the release of which requires notification unless federally permitted.

Responsible Manager (RM) - The manager who has the "ownership" of a specified area of the facility.

Root Cause Analysis Team (RCAT) - A group of WIPP personnel appointed by the WIPP management to analyze an event and determine its causal factors. Depending upon the severity and complexity of the event, the RCAT may be considered complete with only one person assigned.

Root Cause Analysis Team Leader (RCATL) - A person assigned by the FM/FMD to lead the RCAT in the investigation of a reportable event. The RCAT may be made up of only one person who therefore becomes the RCATL. Occurrences categorized as unusual or emergency will be investigated by the RCATL and at least one more member of the RCAT.

Service - The performance of work, such as design, construction, fabrication, inspection, nondestructive examination/testing, environmental qualification, equipment qualification, repair, installation, or the like.

Substantial Safety Hazard - A loss of safety function to the extent that there is a major reduction in the degree of protection provided to public or worker health and safety.

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Supplier - An organization furnishing items or services. An all-inclusive term used in place of any of the following: vendor, seller, contractor, subcontractor, fabricator, distributor, consultant, or subtier suppliers.

Transportation Event - Any real-time occurrence involving any of the following transportation activities: material classification, packaging, marking, labeling, placarding, shipping paper preparation, loading/ unloading, separation/segregation, blocking and bracing, routing, accident reporting, and movement of materials. Transportation events with injury(s) may also require reporting in accordance with Group 3 criteria.